## DETAILED ACTION

### *Claim Status*

1.      Claims 1, 3 and 4 are pending in the instant application.

Claims 1, 3 and 4 stand rejected.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –(b) the invention was patented or described in a printed
> publication in this or a foreign country or in public use or on sale in this country, more than one year prior to
> the date of application for patent in the United States.

2.      Claims 1, 3 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by

U.S. Patent No. 6,127,970 to Lin, hereinafter "Lin".

Regarding claim 1 Lin discloses a satellite simulation modeling system based on

an interface standard model, the system comprising:

a satellite subsystem standard model for simulating operations of physical

satellite subsystems [Lin: Figure 2, item 22, the emulation of the GPS and IMU parts of

the satellite system (Column 6, lines 53-63, Column 7, lines 35-60)];

a flight software module for generating a control signal changing operation state

of the satellite subsystem standard model [Lin: Figure 2, item 23, Produce real time

trajectory data from the 6DOF trajectory generator 10 and send the real time trajectory

data to the coupled real time GPS/IMU emulation system 20. The real time trajectory

data are defined by the user (Column 6, line 63 – Column 7, line 2)];

an interface standard model for converting data transmitted from the satellite

subsystem standard model and the flight software module into data to receiving

components and transmitting the converted data to the receiving components, the

interface standard model including a data processor

> [Lin: Figure 1, item 25, 23,  an interface board 23, a signal regulator and connector board 24, and
> a synchronization module 25 (Column 7, lines 3-60)]; and

a model managing means for generating the satellite subsystem standard model

and the interface standard model as independent component objects and controlling

each component object to perform satellite simulation

> [Figure 1, item 40, Collect test data from the integrated GPS/INS system 30, during the test, by a
> data acquisition and performance evaluation system 40 which includes a computer. Usually the
> comparison between the reference 6DOF trajectory data and the integrated GPS/INS resolved
> vehicle trajectory data is done to determine whether the integrated GPS/INS system 30 works
> properly and to evaluate its performance (Column 7, lines 28-34)]

wherein the interface standard model includes data processing information and

data link information, and wherein the data processing information and the data link

information are modified when the satellite subsystems standard model is changed, the

data processing information being at least one of a data format , a data structure and a

data attribute [Lin: Column 7, lines 3-21].


Regarding claim 3 Lin discloses the system as recited in claim 1, wherein the

interface standard model includes:

the data processor for converting data transmitted from the satellite subsystem

standard model and the flight software module to data appropriate to the receiving

component based on characteristics and a structure of the data; a data information

provider for extracting the data link information and the data processing information

stored in a data storage and providing the data link information and the data processing

information to the data processor [Figure 2, items 221 and 222, Column 7, line 61 –

Column 8 line 15];

the data storage for storing the data link information and the data processing

information [Lin: The GPS satellite constellation simulation 212 reads orbit parameters,

satellite clock parameters, and atmospheric parameters from ephemeris data 211,

which are stored in a GPS/IMU emulation computer (Column 8, lines 16-32)]; and

a data port for receiving the data from the satellite subsystem standard model

and the flight software module and transmitting the data processed in the data

processor to the receiving components [Lin: Figure 2, items, 22 and 24].


Regarding claim 4 Lin discloses the system as recited in claim 3, wherein the

data processor converts telemetry data transmitted from the satellite subsystem

standard model to data appropriate to the flight software according to characteristics

and a structure of the telemetry data and converts telecommand data transmitted from

the flight software module to data appropriate to the satellite subsystem standard

module based on telecommand data processing information according to characteristics

and a structure of the telecommand data [Lin: Figue 2 item 23, The interface board 23

includes a GPS emulation input/output interface 231 and an IMU emulation input/output

interface 232 (Column 7, lines 35-60)].

### Response to Arguments

**Applicants Arguments (claim 1)**

Lin does not disclose an interface standard model for converting data transmitted

from the satellite subsystem standard model and the flight software module.

**Examiners Response**

The Examiner has considered Applicants response and found it unpersuasive.

The rejection has been updated to further highlight the teachings of Lin. In particular Lin

discloses that the 6DOF trajectory generator (flight software module) is put through the

emulation system 22 (satellite subsystem standard model) and the combined data is

sent to the interfaces 23, as controlled by synchronization module 25

**Applicants Argue (Claim 1)**

Lin fails to disclose the interface standard model includes data processing

information and data link information,.., the data processing information being at least

one of a data format, a data structure and a data attribute

Further, independent claim 1 recites "the interface standard model includes data

processing information and data link information," and "the data processing information

and the data link information are modified when the satellite subsystems standard

model is changed."

**Examiners Response**

The Examiner has considered Applicants arguments and found them

unpersuasive. Lin discloses that "The Ethernet network controller board 21, as shown in

FIG. 2, is used to receive real time vehicle flight trajectory data from the 6DOF trajectory

generator 10. The 6DOF trajectory generator 10 and the real time IMU emulation system 20 can also been connected by a standard serial communication port such as RS-422/485, according to the application requirement." (Column 12 lines 54-60). The data link information is inherent in the communication system used by Lin, and the data processing information is just the data passed on to the various components as necessary, and this data is one of a data format, a data structure or a data attribute.

Further the synchronization module item 25 shuttles the processed data (data processing information) and controls the timing of the data output (data link information).

### Conclusion

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUKE OSBORNE whose telephone number is (571)272-4027. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Paul L. Rodriguez can be reached on (571) 272-3753. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Luke  Osborne/
Examiner, Art Unit 2123


                              /Paul L Rodriguez/
                              Supervisory Patent Examiner, Art Unit 2123